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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,873	04/09/2001	John Plevyak	50269-0521	2653

7590 03/25/2004

Hickman Palermo Truong & Becker, LLP
1600 Willow Street
San Jose, CA 95125-5106

EXAMINER

CARDONE, JASON D

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 03/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/829,873

Applicant(s)

PLEVYAK ET AL.

Examiner

Jason D Cardone

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 April 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2.3</u> . | 6) <input checked="" type="checkbox"/> Other: <u>See Attached Office Action</u> . |

DETAILED ACTION

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Hauser et al. ("Hauser"), USPN 6,076,112, in view of Fan et al. ("Fan"), USPN

6,324,165.

5. Regarding claim 1, Hauser discloses a method of managing a plurality of data communication connections having differing data communication rates, comprising:

A) assigning the data communication connections to a plurality of buffers [Hauser, col.3, lines 26-51, col. 5, lines 4-60 and col. 6, lines 20-60];

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B) establishing a buffer of the plurality of buffers as a current buffer [Hauser, col. 3, line 63 – col. 4, line 45]; C) establishing a connection assigned to the current buffer as a current connection and D) communicating data over the current connection [Hauser, col. 3, line 63 – col. 4, line 45];

E) in response to communicating data over the current connection, reassigning the current connection to a different buffer of the plurality of buffers based upon where the current buffer resides in the circular order and a bandwidth estimation of the current connection [Hauser, col. 5, lines 11-60, col.15, lines 20-53 and col. 16, lines 30-65];

F) repeating steps (C), (D) and (E) for each connection assigned to the current buffer [Hauser, col. 3, line 63 – col. 4, line 45];

G) establishing a next buffer as a new current buffer, wherein the next buffer follows the current buffer [Hauser, col. 5, lines 11-60, col.15, lines 20-53 and col. 16, lines 30-65]; repeating step (F) and (G) for each bucket of the plurality of buckets [Hauser, col. 3, line 63 – col. 4, line 45].

Hauser does not specifically disclose buckets that have a circular order, establishing another bucket as a fast bucket and waiting until the earlier of (1) when any connection in the fast bucket is ready for communication or (2) when a pre-defined period of time elapses. However, Fan, in the same field of endeavor, discloses buckets that have a circular order, establishing another bucket as a fast bucket and waiting until the earlier of (1) when any connection in the fast bucket is ready for communication or (2) when a pre-defined period of time elapses [ie. real-time buckets, Fan, col. 3, lines 15-40, col. 5, line 66 – col. 6, line 42, col. 7, line 26-36, col. 10, lines 59-66 and col. 11,

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line 45 – col. 12, line 55]. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate buckets (and fast buckets) in a circular order, disclosed by Fan, into the buffer managing system, disclosed by Hauser, in order provide QoS support for multiple classes of traffic and increase throughput.

6. Regarding claim 2, Hauser-Fan further discloses always placing each newly established connection in the fast bucket until a pre-determined number of bytes have been communicated on the newly established connection [Hauser, col. 5, lines 11-60, col.15, lines 20-53 and col. 16, lines 30-65] [Fan, col. 7, line 26-36, col. 10, lines 59-66 and col. 11, line 45 – col. 12, line 55].

7. Regarding claim 3, Hauser-Fan further discloses measuring time elapsed in processing connections in a bucket; and reducing a rate of establishing the connections when the measured time increases [Hauser, col.15, lines 20-53 and col. 16, lines 30-65] [Fan, col. 11, line 45 – col. 12, line 55].

8. Regarding claims 4-9, claims 4-9 have similar limitations as claims 1-3.

Therefore, the similar limitations are disclosed under Hauser-Fan for the same reasons set forth in the rejection of claims 1-3 [Supra 1-3].

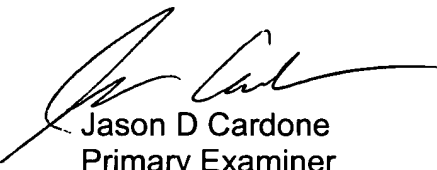
Conclusion

9. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason D Cardone whose telephone number is (703) 305-8484. The examiner can normally be reached on Mon.-Thu. (9AM-6PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jason D Cardone
Primary Examiner
Art Unit 2142

March 22, 2004